

Amendment
Serial No. 10/684,881

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A MAC (Medium Access Control) control block for controlling transmission of data between a plurality of MAC clients and a plurality of MACs in an Ethernet passive optical network (EPON), comprising:

a plurality of optical multipoint (OMP) blocks connected between the MAC clients and the MACs for implementing a multipoint control protocol (MPCP); and

a multipoint gating control block configured to receive transmission_in_progress state variables from the OMP blocks connected to their associated MAC clients, to determine transmission states of the MAC clients with the received transmission_in_progress state variables, and to selectively control the OMP blocks so that when any one of the OMP blocks is transmitting the data, the other OMP blocks are prevented from transmitting data,

wherein each of the transmission_in_progress state variables indicates whether a corresponding MAC client is transmitting data or not, and

wherein each of the transmission_in_progress state variables is expressed as a Boolean value indicating whether a corresponding MAC client is transmitting data or not.

2. (Previously Presented) The MAC control block of claim 1, wherein the multipoint gating control block is configured to control data transmission by the MAC clients by providing transmission enable state variables to the OMP blocks connected to their associated MAC clients.

3. (Original) The MAC control block of claim 1, wherein the multipoint gating control block determines a value of a transmission enable state variable by driving a timer indicating a

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transmission start time and a transmission stop time and provides a transmission opportunity by delivering the value to a corresponding OMP block.

4. (Currently Amended) A multipoint gating control method in a MAC (Medium Access Control) control block for controlling transmission of data between a plurality of MAC clients and a plurality of MACs in an Ethernet passive optical network (EPON), the method comprising the steps of:

receiving transmission_in_progress state variables from the OMP blocks connected to their associated MAC clients;

determining transmission states of the MAC clients; and

controlling data transmission by the MAC clients by providing transmission enable state variables to the OMP blocks connected to their associated MAC clients,

wherein each of the transmission_in_progress state variables indicates whether a corresponding MAC client is transmitting data or not, and

wherein each of the transmission_in_progress state variables is expressed as a Boolean value indicating whether a corresponding MAC client is transmitting data or not.

5. (Original) The multipoint gating control method of claim 4, further comprising the step of determining a value of a transmission enable state variable by driving a timer indicating a transmission start time and a transmission stop time, and providing a transmission opportunity by delivering the value to a corresponding OMP block.

6-7. (Canceled)

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8. (Previously Presented) The MAC control block of claim 1, wherein the plurality of MACs is a plurality of virtual MACs.

9. (Previously Presented) The multipoint gating control method of claim 4, wherein the plurality of MACs is a plurality of virtual MACs.

10. (Canceled)

11. (Canceled)